

Exhibit 2

aatatttaaa atgcagattc tagactcaat caggcgggag cccagaaatt tgcattgtta 180
acacctgtgt gtgtgtgtgt gtgtgtgtgt gtgtttata aacacagaag 240
gttggaaacc atggataact aagtgaagtc atttgtcac tcagattga attttctaca 300
ggctatagag tgcagttgg ctaaagcaaa acctaggtac agtcaggact acacaattcc 360
agttcgctgt ggggtggaa gggatgggtg gcccagtgc ggcaagcctt gatcttgcc 420
cgggcttgc cttctggga gaattacctg cttctgctgg actgaggggtg ccctcatctc 480
tggctagagc ccgtgctgcc atggaagact cttccgggtg cccactaatac cttgatgttc 540
accttgcctcc ctgccccccag 560

<210> 5
<211> 11539
<212> DNA
<213> Mus musculus

<220>
<221> modified_base
<222> (1847)
<223> N = A, C, G OR T/U

<400> 5
gagctctaac tgagctggga aagttgatca tttgtttatt ctttttaggg tattgggggg 60
gcacggatgt atgcatgctg gtatgtatgc atgctgggg a ttagggcct catgtgtgct 120
aaatacatgt gcctattctg taatgtttc ttgtttgtt ttaactcaaa ttaatttagag 180
gcagttctc tgtaaaaaaa aaaaagggtgg aagacactgc catctcattt gtgttgggac 240
ttgagatata tatataatata tatataatata tatataatattt atttattttat 300
ttatgtgtgt atgtgtgtat aagaaagcgg ggacacactca t tgccatgg t gttatggg 360
gacacacgtg tcctgtgggg gaacattgtg tcaggggaaac aaacatgtgc tgagggtgg 420
gggatataata t gttccactg tggtgat tggggggag acatgtatgt gctatgatac 480
ctgtgtgttag gacagaggac acactcacac aggagccttc ttacctgctg agctgtctca 540
agcagtccaa gmcctccatg gctgtagcca ctcttcctcc ttgctacagt cccacatcca 600
sccaacacat aaaggctctg gcagggaaata aattaaatyt gtttgggtg tgggtgctga 660
cggctcaart ctccgggtga tggtaatgtt taaarcaarc caamatcagt tctccagtg 720
cgaagttatt gaatgactga ccaatggta acacttagga ttttaaaaaa ttatttgtat 780
tgtacattt gaattacatt aatctaaaaa taaactacaa acataaaacac actgtgggtg 840
gagctgggca tagtggcaca tgccttaat tccagaactt gggaggcaga ggctggcata 900
tctctatgac tttgaggcca gcctggctta tataatgagt tccaggacag agagatcctg 960
tctcacaaac agagaaaacc ccataactat acttttattt tactggttgg tctacagtgt 1020
aaagaattgg caaagaatata gaaagattac actgggaaga aactgaaagc catccagagt 1080
aatgaagcaa acccctcaca aatgtggaa acatttcaca tgggtgaggg cttgcagcca 1140
gcctgtgtca atttatgttt tggtacgtga gcaacttagag cagttccag ttctctgggt 1200
ctctaccaat cttagcttgg ttaatattca gggatgagtc ttccatcacc ggtaatctaa 1260
tttgcatttc tatttaaagg ctcttaaagg cacaggcagt gcattggta aatgtggcaa 1320
ataatttctt tgacaaatcg accaattgtc agattggcct gctagtcatt tgtttcaatg 1380
agaactgttt tttctcaag gatgctctt tacaccggct agaagcaggg ctgtcatttt 1440
tataggtctc t gttgttattt tggtgtt gttctgtt gtcataatcat ttatcactga 1500
gggaaaatatac acacaaaggcc ccccttctt aaaagtatac atgtatcatt ttgtgacagc 1560
tcataagaag ctgtttttt ctgcctggac acaggctctg acctgtgctg tgccttgc 1620
aagcttgc agacccttcc acagctcccc ccaacaacga gttccccagt acctgcctca 1680
cctcatcaat atgggtgacag cagcctctga tgcgctgact ctctggcaca ttatggcagt 1740
gttaaaaagct tccatctctc tctttgtga ataatgaacc tcaggtgtt caagagaccg 1800
gaatgttctt cacctgcctg cacacatctc ttcactttct tttatanaatc aggttagggac 1860
tgggcgtgt a gatggaacaa actgtttcc gttccccagc catctctgca ggtgcactcc 1920
acataaaatca agtgttaaaa gtgcttgat taaacaggac aggccgttca ttgagttcat 1980
ctgttcacat actgtctggc aagcgctgac tgagggtctc ctctgtaccc tggtctgaga 2040
actaacaaaa gacgaatcaa catacagaaa actgttattt agtgcactgat taaactaacg 2100
aaggcatggg ctggagaaat aactcagcag ttaagaacat ttgctgatct tgcagaggac 2160

ctgggggggg ttccctagcac acacacagggac agttccagtc ccgggtgtgtc cttttctcac 2220
ttctgtggac acaagtttta cacatagtgc acacacatac actcacatat ataaaacaga 2280
acatttaaaa gtagtttaa ataacggaat catttatac ggttttcat tacataggt 2340
aataggcaaa aatctgcatt ttattgttgc taagtttaa ttatattttc tctgtgtgt 2400
catacgcatt cctccttatac tggatgtgc tgcaactgtgt gcatgcattga acccacagag 2460
accagaagag taccacagat tctctggagc tggagtgtt gataggctgt tggagccac 2520
tccacatggg gattcagagt tgaacttcgt tctctgcag aacagccagc tcttaactga 2580
tggctttac ctccagccac ctttcctca tttttaaaat ttcccttcctt ccttttgag 2640
acagggtctc aatacttagc tcatacccaac ttgaccacac tcttcttcgt ccttagtcac 2700
cacaatgtt agtttataag catgcgtcac tatgcccggc tttaaataaa ctcaccata 2760
atcccagcac tgaagtagac aaaaggaggat atcgatgggg ctgactggcc acaaggctg 2820
cttcaagttc aatgaagacc ctgtctcaag ggaataaggc acagaggata gagccatacg 2880
cctgacactcc tcctctggcc tctaccaggc acacacacac acagagagag agagagagag 3000
agagagagaa actttttctt ctttttttt aaaaatatta tttatattcat gtatatgagt 3060
acactgttgc tgcttcaga caccctaaaaa gaaggcatca gatcccattt acaaattgtt 3120
gtgagccacc atgtgggtgc tggaaattga actcaggacc tctggaaaag cagtcagtgc 3180
tcttaaccat ctcttcagcc ccacaaaagaa acttttaatg agcaaataat tgcttccaag 3240
taaataactac taatataattt ctaaccatac tatacaagga attattaaag aacggataat 3300
aggagaataa aaaattataa gtcactttt aatgtctatctt aatccatcta gaacaaaaac 3360
actgtataaa tgcaaaagag cgcagtgccctt agattaaata aataaaatgc agaccaataa 3420
gtaaacttta tagcagcaca tggaaatgac gaaattctca aaaaaaagct caagatggc 3480
agtttattta aagtggaaata caggagaaaat aaagcacaga aagatactca aaggcataga 3540
agttAACATA ggggggctgg cgagatggctt ctacaggtaa gggcaccggc ctgcttcc 3600
aaagggtctg agttcaaattc ccagcaacca catgggtggct cacaaccatc cgtaatgaga 3660
tttgactccc tottctgggt tgctgttgc aaaaattttttaatgacttgc ttccatacc aatgccttt 3900
aaataaaaact tttttttttt aattttttttt gttAACATAG aagcccactc aggacccac 3780
tcagtcctag agtatgacat tattatggac attaaaaaga gaaaattcag cagtagtgt 3840
catgcactgc atatatacac aaatcccttgc gtttccatacc aatgcctttt agaccacttg 3960
tggctctgca aacctgtaat ccttagcactt gtggaaaggt cagctcagga actttggaa 3960
ggtcatgaaa ctcttgcccc tccagaaggg agaggctaat taacatttct cagaccacag 4020
ggcgaaacc gacctgcggg tggggacaga ctgttgcctt tttccagact agggaaagtcc 4080
ttgtcacctc attccctaaa gaccaatcaa tttaaagggt gcaactgttcc gccaatcata 4140
tttgccctag ttgtgtatgc tctattctgc ctttagaaac cgataaaaaa ctagcgaagg 4200
ggtaccaggg gtaacccccc ctcccttcagg tctgggacaa tcccaactaca ctggaaacaaat 4260
aatttcctct gctttttgc attgatcaca gtcacacttc gtggtaagtt aagactccct 4320
ggagtcttac attggcaaat gcaggcaaaa gatatccgaaa ctcaaggtca tctaaaacta 4380
catagcaagc atgctgttag cctggctcc atgagacccct gggggagggg cagagggaga 4440
ccgttcagaa gacagtcaag atgttgcagc agcacagggc gcctggccac cagtgtgtc 4500
accagacatg ttaatgttgg aataaaagcctt caatcatgac tctccagtt ttataattgg 4560
aaataagaaa gggaaagacta taggaacaac tggatgttgc acactattta taatagcaaa 4620
gatctcagag taacccaaac ttcttagacat tgatgttggg agatcttttgcagcttatt 4680
ttgaaaactt tacaatgtt aatatgtaaa aacaaggaca gttttgtttt ttgtttgtt 4740
ttgtttgtt tttagggatatttcatat aataacagaa agagaaaatag agaattccata 4860
ttccccacta tgctttaaag gctttctgac gacactctt agctgccagg agagctgaat 4920
aaaactagtt ctgaaaactat caataggctt ctgaacacag ggaacccac ccagcccc 4980
cccctacccc caagacaggg ttctctgcg ctctgcctct ctgcctctt ctctctctt ctctctgtc 5040
ctctgcctct ctgcctctt gcctctctt ctctctgtc ctctctgtc ctctctctt ctctctgtc 5100
ctctctgtc ctctctctt ctctctgtc ctctctgtc ctctctgtc ctctctgtc 5160
ctctctgtc ctctctgtc ctctctgtc ctctctgtc ctctctgtc ctctctgtc 5220
gcctctgtc ctctgcctcc tgagtgtgg tggctctggc tggctctggaa ctcggagatc 5280
ttcctttatc attttaaaaaa gaatttccta tggactact gtatataat caccacacgg 5340
ccaataactcc cccccaactc ctcccaaaatc ccctctaccc actcaaattt ttatcttgc 5400
ttctttatca ttattataca tatgtgtata tatgtgtgt tggatgttata tatataactat 5460
atactgttaa tgagtaacat ttagtgttat tcattgttgc atgtttcaat tggctttcc 5520
aggaggctgg ggggatggct cagtgccaa aattcttagt gcacaaaggct aaggaccagg 5580

gttcagatcc ccaatataaa ggctggctgg acatggtggc ttgcctatga tactagcatg 5640
cttgctggaa gcaaagacag ggaatccctg gagacttaga atctcagaag tgatctggc 5700
tggacagact agctgaactg gccagctctg gttcatcaa gaaaccctac ctccataaca 5760
taaagtgtga tggagaaaagg cacctaatgt caacctcaaa cccctacctg catgtgcaca 5820
cacatacac cacaccacac acacacacac acacaccaca cacacacaca 5880
cacaataaa taagtaaata aataaaatat ttagctctcc agaccaaatac ttggtgaaaac 5940
ccatgcattt gcatttgtgt gtgtcctaca aacactgaag gttaaaagc atgctccta 6000
gtaattttat agcagttgc gttccagat taaaacaga ttctataaggc tacacagtgc 6060
taaatggatt atgctcagat acagattgaa aaggatacag attgaaaagg gtcggggtct 6120
gggcccaggat gacgggcca gtttttttttgc cccgggttgc ctttcaggga agggttacag 6180
gattcaccac tgggggtgtgg cctatctgct gttaggacct gaattgcctg gagtgtttct 6240
agttcccact agttgttcaa ctttaccttgc aacctctgct cccagggaaag tcatcaggac 6300
tctgccatcc ctggagtc tgcagagggtt gttgaccaa cagtttccc caggccttcg 6360
cccacgaccc caggttaagggtt gttggattt gaaaagatgc aattgtata ggagggactc 6420
tgaaggcaga cagacgcacc gcctcctcac gttggctagt ctaatataaa catcgccgtg 6480
gatggtgagg atagactcca tgcccttttgc tgaaggcatt tcctggcatc agtcctgtac 6540
ttcagagttt caccatcag acaaatttgc tgggttggaa ggaggagggtg agcagggcca 6600
ttcccatcat ttctcctcag aaatggaaag gcaaggaaaa catgggttc ttcagacact 6660
taatccctgg gactgcaaaa tggtggtgcc cctcctccac agtcgtcac ggcggggcag 6720
gagatgaggg ccgaatgaag catagatcta gctattttttt ttttagtgcc ttcagtaaat 6780
ttaaatcaa ataaggaaag ggacctagat ctttatgttta tggcattgtt aaaagtgaga 6840
actttagtgc aggggtgtgtt ggcgcacacc ttaatccca gcacttgggaa ggcagaggca 6900
ggcggatttc tgagtttgag cccagctgg tctacagagt gagttccagg acagccagg 6960
ctacacaggt ttctctatac agagaaaccc tcttcgtggaa accaagaaaaaaaagaa 7020
aaaagaaaaa aagaaaaagaa gaaagaaaaa aagaaaaagaa gaagaaaaagaa aggaaggaag 7080
gaaggaagga aggaagaaaaa aggacaacat ggtctagggg tcaagagac gatctccaa 7140
aacaccaaca atgccttgc gtaaatgtat gtcgttgatt tggggatgtt ggcctccagc 7200
tcaccatttc ctgccttagc ttccaaagtgc ttaggattt aggcttgac caacacatct 7260
ggcttacgct tattgtgtgtt ggaagggggag tgctgagtgtt gtcctgtgt ttgttactta 7320
tatataata tatgtatata cgcatgtacg catacttgc tgggttggcc agaggccaat 7380
gtcagctgct ctcatcttatt ctttttttattt acattgtatt tatttttttgc tttttttttt 7440
tgtttcatcg tacgcatgc gccactcatg agcatgttaac agcacaggta tgaaggtaga 7500
cttgcaggag tcagttctct cttctgtca ctggagttcc aggaccacac tccagcccc 7560
aggcctggc tgtaagagag ccatctact ggtctctac tttgttttct gagatagcat 7620
ctagactcac ggaacacctgaa gctcatctag attacattt gctggccagc tgatgcattt 7680
taaggtaaaa tcttcattcc atccctaccc cacttccact cccagtgtcg gagttcgaaa 7740
cacctgcccac caagcccagt tttccctggaa tgcagaagct ccaaactcag gttcccatgt 7800
tcgcatggca ggcacattttt cagttaaagcc tttcccccac ctccttacc ctggctctg 7860
aatggggggg aggctataaa tcaggctgct ctcagacattt aggttagaaaa tagaccat 7920
acatgagggaa agatattcac ctgccccatg ggtaccaggaa agtgcgttcc aactccttt 7980
ttgcttatca ggagaaatgc tgactactac ctctggtaat tttgtatgttggagggac 8040
ggacattcat aggaccccat tcctcgctgg tgagagtgaa gacagttttt ctgaagggca 8100
ggagatctgt ttagaaaaga tggatgtgtt tttctgaagg gaaatggagg tagagtcgac 8160
ctggggagaga ggggggggtgg gggatgttgg ggaggaatga aaggaagaga gatggcagtt 8220
ggggatgtatt gtataagaga agaatcagaa agaaaaaaaag aaaagctacc tgcacccttc 8280
aagtgttccct ctgtgtggaa ggctgtctca ggactacat gggcacccgag aggcatcagt 8340
gagggttaggt acttgcattt gttccctga aaacaaggac agggaaatctg ctgcacggcc 8400
taagatggca aaatgtggca caatcaagta aggcccaggaa ttctgtctgt ggtgcagacc 8460
tgctgttagaa tgagctccca gcattccac ttgtgtgttggagacagcat gttgcagagc 8520
catgtgagga tgagggttcca ggccaggagg atgtcaaccc accaccatgt agccagtggg 8580
ctggggggggc ttggggccac caaggagctt gaggcactg acagttgggtt atgtacacaa 8640
gtggggcgtgt cacacaaccg tgcaacacag agaaaaatccc tggatgtaca acttctaaac 8700
caccctgagg caaaaaggagt agacaggaa tttagagccta gcatatttggaa gtcgagttgc 8760
catgcagctc ttggaaagcgt gaggaaaggaa atttcctggaa aggataggtt gtcttcctag 8820
cagcctcgtc aatagatgtc aatgtatgag gtgtacctg ctacaatccct gcttcttcag 8880
aagactgagg cagggggatt acttgcaccc agaagttcta ggccagttatg gacaacatag 8940
caagagtctg atttaaaaaaa aaaaaaaaaaag taaagaggaa aaccaaataatg gtacgtgcc 9000

acactagtg cttcctgctc caagggtcct gggcacatga gcttgcttag tgccagaaaa 9060
 gtcagaggag gagagggcag acagagaccc tcgtctccac ctccttgac tgactaatgg 9120
 ggctggatat aatctgttt acaaaggac agctttcag agctgttct atctaagggtt 9180
 gctctgaata gccatctcg aatatgccag agaagaatat ttagaggcgg cctatttgg 9240
 tctcccacaa agattcaca gggaaaatgt atttgtgtt tatttataca actaaaaata 9300
 tgcacatcagcc cggggaaact ggctcttgc tgccttcaa gtgaaggatg ggttaatttc 9360
 taagaaaatgaa aagcaaattg tagtgcaggc accacggatg ctgcacatca ccagcggtt 9420
 agtggcttga atggaagagc acaccccaag tatttgaagt aggtgaggag agagaccagg 9480
 tctccagagt tgggcctgca gtggccaggg taagtccaa gggcgtatg acgcagaaca 9540
 gagttggcaac ctctaccagt agtagaattc agtctcattt cctaaacctcc cataaagcag 9600
 agaatattgc actcttttc tctctctc tctctctc tctctctc tctctctc 9660
 tctctctc tctaactcac agagatctc ctgcctctgc ttcctcattt ctggaaataa 9720
 aagcatgtgc caccacatgc agctctctt gttggagag agaaaggcag acagacagac 9780
 agacagacag acagacagag tataatgtgt gcagatgtcc acagaactcc gaagagggtg 9840
 tgggacccccc agaaaccgga gttctaggca gttgtaaagct gtccagtggtt tggtcgaaac 9900
 tgaactcaag tcctctggaa aactggaaag tactcttaac cactaagcta tctgttagtc 9960
 ccccaagaat gtcttatctt gataggcctt cagatctcac agtccagggg gctgactgct 10020
 acaagggtta gaggaaagaa aactggcccc aggcctgagtt tcagagtgc atctccagag 10080
 ttcttccttc ctttgcgtg tagtaatttc ctaccctaca cgaggagaaa aggaacagat 10140
 atgtccagta tgcctggcat cttgaaaggc cactgactct tgccgctgtt gagcccttt 10200
 cttggggag tgcagagaag tgctgctaga gaggttcaaa agaaacacaa cagtcaaaat 10260
 agttgtggc caaggggggg catgtccccctt gtatcgccct tgcaaaagccc tttcaacagt 10320
 gtagccaagg ccatgtttga cagttacaagg ctgtaaagccc atgcataaggc aagggtggg 10380
 ataaagggtt actgttcaag ttagttatatac acatcaag tttgttcatc ttacatcctt 10440
 aggttaagggtt gggtagctt ttagctccac ctctcccgca ggaaagcatg tccacggtaa 10500
 ggttagataact gttaggtttt gctttgtttt gacctttctt tcttcgttgc ttggattgt 10560
 acttgggaac ttcaactcatg cagcccatgtt ttcaaggctt cataaaatcta taaatataatg 10620
 gttggagtc ggtccagcat atgtgggtac cagttccagg ctggatagc aatttatttag 10680
 ctatttgtct ttagacaaggta aactataggg ttctgagctg taatggccac caaacaggc 10740
 ctttaagtat ctttattggc caaacccagg ggttaaaaca ctgaacacag tatgggttt 10800
 tcaactgtca tggagtccac attcttagcag gggattttt cacacaactc acaaataatgata 10860
 cagaccacag cagggtgatt tgacagagac aacgaagggg ttgcctgagc tgcagtagtc 10920
 cgggagcgc tcttggatggg atctgagatc tagatggcag agcgccttc ctatgtaaa 10980
 tccaaaggccc tggtaactcc tcagcaagag tagctgggg aagaccagaa gtgaggagga 11040
 aaaggctcag agtggagcat ctaaggctgc agcacccctca gagacaggct ttggagctt 11100
 cctgtgggtc agcctactgt gggaaagagac cagttggggg tttaagctgt ggggatgggt 11160
 atattttggaa aggcaacaa gaacaccaggc agctcaggca atgttagggg gggggaaagg 11220
 gatggatgtat cgaggacggc cccagaggatt ttaaggactg ttttttttttggg gtgagaagca 11280
 ctgtgggtga ggtggagttt gggggaaatgtt gtgaagatct attttttttttggg ccatgaggaa 11340
 tttgggggtgc acacacacac atacatacac accccatcat gtccttgc acagacgggg 11400
 tgataatgtt actggaaaggta agaagggtggaa aagaggacca gcaaggaaagg tatccagtg 11460
 ccaccccaaca gtcaccctc agacagaccc ttttctcattt ttcattaccc aggtgcccgg 11520
 agaggccactt cccatcacc 11539

<210> 6
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic
 Primer

 <400> 6
 atctttggcc ggggcttgc ct